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September 15, 2010

Ex Parte

Ms. Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

Re: Unlicensed Operation in the TV Broadcast Bands  
ET Docket Nos. 04-186, 02-380

Dear Ms Dortch:

As Microsoft Corp. has previously explained, finalizing white spaces rules will enable the U.S. to maintain its leadership in developing and deploying new wireless broadband technologies.<sup>1</sup> This filing provides updated information on the status of several countries that are in the process of evaluating and/or enabling white spaces access abroad.

In Europe, the United Kingdom has taken several steps toward enabling TV white space access. Last year, Ofcom issued a statement in support of “license-exempt” or unlicensed access to “interleaved” TV white spaces spectrum.<sup>2</sup> Ofcom determined that white space devices should be permitted to rely on geolocation or detection, but not both. Ofcom has concluded that “the most important mechanism in the short to medium term will be geolocation.”<sup>3</sup> Earlier this year, Ofcom sought additional comment on TV white spaces database operations.<sup>4</sup> The United Kingdom is not the only European country investigating white spaces access. For example,

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<sup>1</sup> See, e.g., Ex parte letter of Microsoft Corp., ET Docket Nos. 04-186, 02-380 (filed Aug. 16, 2010).

<sup>2</sup> See Ofcom, *Digital Dividend: Cognitive Access, Statement on license-exempting cognitive devices using interleaved spectrum* (July 1, 2009) available at <http://stakeholders.ofcom.org.uk/binaries/consultations/cognitive/statement/statement.pdf>.

<sup>3</sup> *Id.* at 2.

<sup>4</sup> See Ofcom, *Digital Dividend: Geolocation for Cognitive Access, A discussion on using geolocation to enable license-exempt access to the interleaved spectrum* (November 17, 2009) available at <http://stakeholders.ofcom.org.uk/binaries/consultations/cogaccess/summary/cogaccess.pdf>.

earlier this year, the Finnish Ministry of Transport and Communications announced plans to permit cognitive radio networks to operate on a trial basis in the 470 to 790 MHz bands.<sup>5</sup>

Individual European Union member state regulators are also participating in discussions about enabling cognitive radio system access to the TV bands. The CEPT (the European Conference of Postal and Telecommunications Administrations, a group comprised of European national regulators) has directed its European Communications Committee (ECC) Spectrum Engineering Working Group (SE43) to define technical and operational requirements for the operation of cognitive radio systems in the white spaces of the UHF broadcasting band (470-790 MHz) to ensure the protection of incumbent radio services/systems and investigate the consequential amount of spectrum potentially available as white spaces.<sup>6</sup> The SE43 Group has established two correspondence groups to determine detection thresholds for devices relying on a sensing-only solution and to develop requirements for a geolocation database. The SE43 is now finalizing a technical report, which it will present to the European Commission (EC).

Last year, the EC issued a consultation document seeking input on how to harness opportunities created by the transition from analog to digital broadcasting, the so-called "Digital Dividend."<sup>7</sup> In that consultation, the EC invited comment on opening up TV white space for use by cognitive radio equipment and urged a "coordinated approach to the regulatory treatment of usage rights for white spaces."<sup>8</sup> To that end, the EC's Radio Spectrum Policy Group (RSPG) issued a draft report last year concluding that "cognitive radio technologies may play a fundamental role in the shift from static spectrum management to dynamic spectrum management and access."<sup>9</sup>

Finally, in Asia, Singapore has been a leader in recognizing the potential of TV white spaces and in developing both a regulatory framework and a technology trial program for the use of TV band devices. In April 2010, the Singapore Infocomm Development Authority (IDA) announced trials, named "Cognitive Radio Venues" (CRAVE), which will commence in the fourth quarter of 2010 and last for approximately 6 months, with participation from both domestic research

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<sup>5</sup> See Press Release, Finnish Ministry of Transport and Communications, *Testing of Cognitive Radio Systems possible* (December 22, 2009) available at <http://www.lvm.fi/web/en/pressreleases/view/1043567>.

<sup>6</sup> For more information see <http://www.ero.dk/>.

<sup>7</sup> See European Commission, Information Society and Media Directorate-General, *Transforming the digital dividend opportunity into social benefits and economic growth in Europe* (July 10, 2009) available at [http://ec.europa.eu/information\\_society/policy/ecomm/radio\\_spectrum/document\\_storage/consultations/2009\\_digitaldividend/2009\\_0710\\_0904\\_digitaldividendconsultation.pdf](http://ec.europa.eu/information_society/policy/ecomm/radio_spectrum/document_storage/consultations/2009_digitaldividend/2009_0710_0904_digitaldividendconsultation.pdf).

<sup>8</sup> *Id.* at 8.

<sup>9</sup> See Radio Spectrum Policy Group, *Draft Report on Cognitive Technologies*, at 3 (October 14, 2009) available at [http://rspg.ec.europa.eu/documents/documents/meeting/rspg20/rspg09\\_299.pdf](http://rspg.ec.europa.eu/documents/documents/meeting/rspg20/rspg09_299.pdf).

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agencies and multi-national equipment manufacturers such as China's Huawei.<sup>10</sup> Through the trials, IDA could gain real-world measurements, generate more awareness of this emerging technology, and encourage the industry to explore feasible commercial applications and solutions. While Singapore is a small market by itself, it has a track record of influencing and leading the APAC market, particularly the ASEAN countries, in driving new technology directions and adoption.

Pursuant to section 1.1502 of the Commission's rules, a copy of this letter is being filed electronically in the above-referenced dockets. If you require any additional information on the positions described herein, please contact the undersigned.

Sincerely,

*/s/ Paula Boyd*

Paula Boyd  
Regulatory Counsel

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<sup>10</sup> For more information, see Singapore Infocomm Development Authority, <http://www.ida.gov.sg/Policies%20and%20Regulation/20100730141139.aspx>.